

Abstract

It is an object of the present invention to provide a method for manufacturing tantalum carbide which can form tantalum carbide having a prescribed shape using a simple method, can form the tantalum carbide having a uniform thickness even when the tantalum carbide is coated on the surface of an article and is not peeled off by a thermal history, tantalum carbide obtained by the manufacturing method, wiring of tantalum carbide, and electrodes of tantalum carbide.

The tantalum carbide is formed on the surface of tantalum or a tantalum alloy by placing the tantalum or tantalum alloy in a vacuum heat treatment furnace, heat-treating the tantalum or tantalum alloy under a condition where a native oxide layer of Ta_2O_5 formed on the surface of tantalum or tantalum alloy is sublimated to remove the Ta_2O_5 , introducing a carbon source into the vacuum heat treatment furnace, and then heat-treating.